Williamsport, PA Chesapeake Bay TMDL Public Meeting Summary

November 18, 2009

Genetti Hotel
200 West Fourth Street
Williamsport, PA 17701

Agenda

- **Welcome, introductions, and meeting logistics – Honorable Jeff Wheeland, Lycoming County Commissioner (5 minutes)**
- **EPA presentation on the Chesapeake Bay TMDL and EPA expectations – Richard Batiuk and Bob Koroncai, EPA (45 minutes)**
- **Next Steps – Andy Zemba, Pennsylvania Department of Environmental Protection (10 minutes)**
- **Public comments, questions and answers – Jeff Wheeland (60 minutes)**
- **Adjourn**

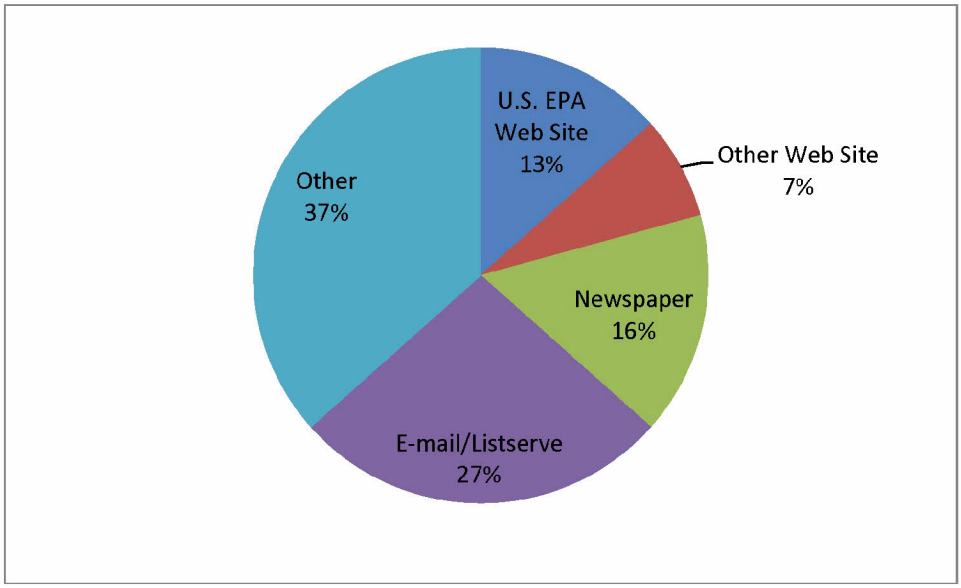
Attendee Details

Total Attendees: 105

Registration Question:

How did you hear about this Meeting?

- U. S. EPA Web Site (11)
- Other Web Site _____ (6)
  - Responsible Drilling Alliance (3)
  - PADEP Web site
- Newspaper (13)
- E-mail/Listserve (22)
- Other (30)
  - Work/Employer (5)
  - Community (4)
  - PMAA (4)
  - Lycoming Coutny Chesapeake Bay Adv. Council (3)
  - Soil Conservation
  - CBTSAB



THE CHESAPEAKE BAY TMDL: Restoring Waters of Pennsylvania and the Chesapeake Bay

Bay TMDL Public Meeting
November 18, 2009
Williamsport, PA

Richard Batiuk and Bob Koroncai
U.S. EPA Region III

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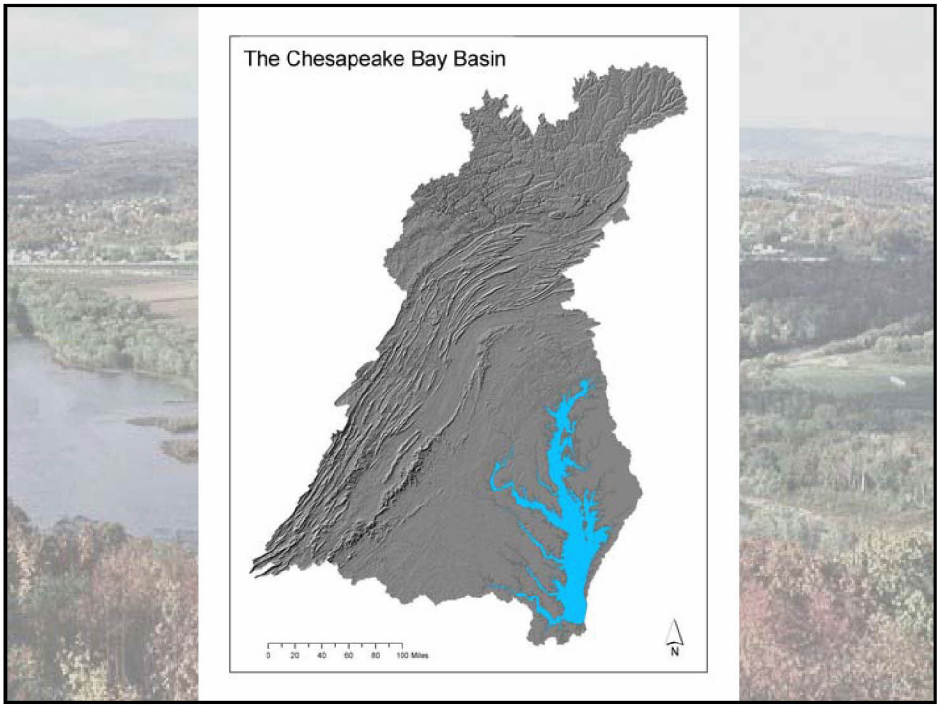
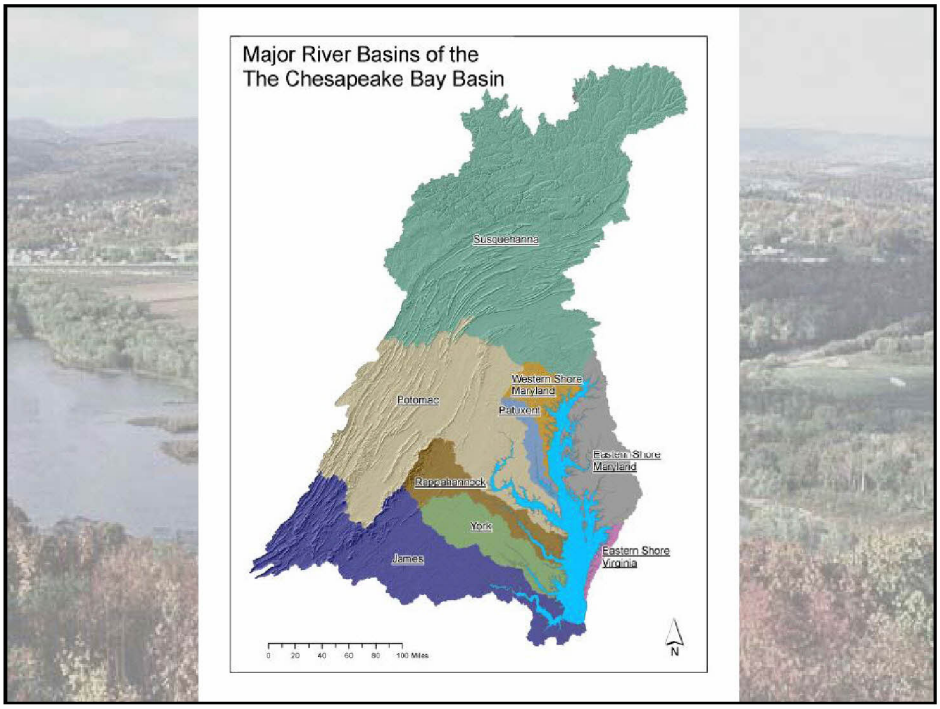
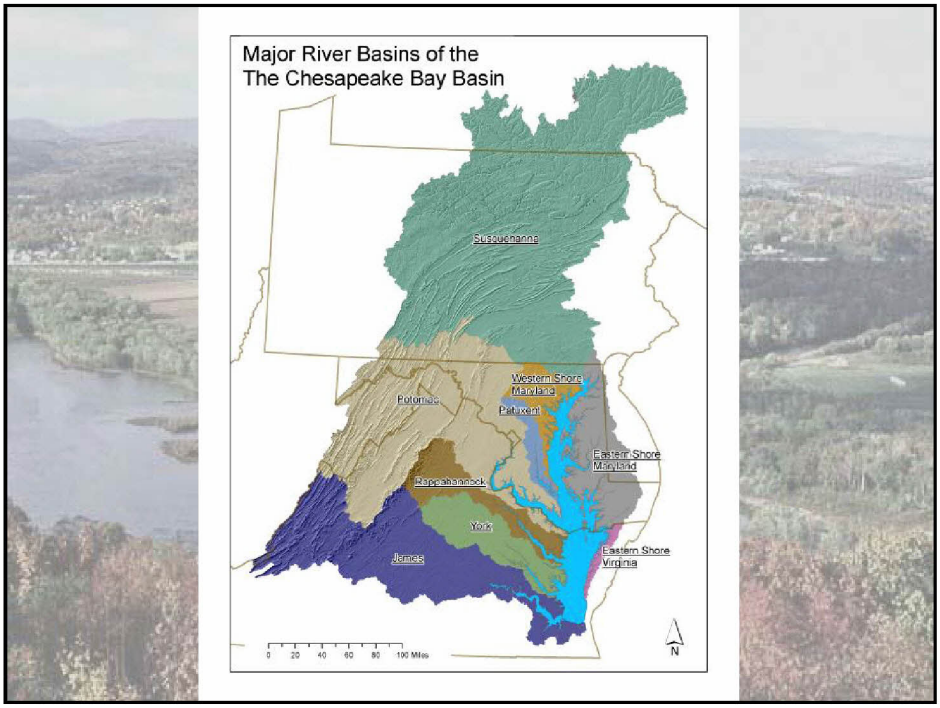

The Chesapeake Bay Basin
0 20 40 60 80 100 Miles
N


Major River Basins of the
The Chesapeake Bay Basin
Susquehanna
Potomac
Western Shore Maryland
Patuxent
Eastern Shore Maryland
Rappahannock
York
James
Eastern Shore Virginia
0 20 40 60 80 100 Miles
N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Susquehanna
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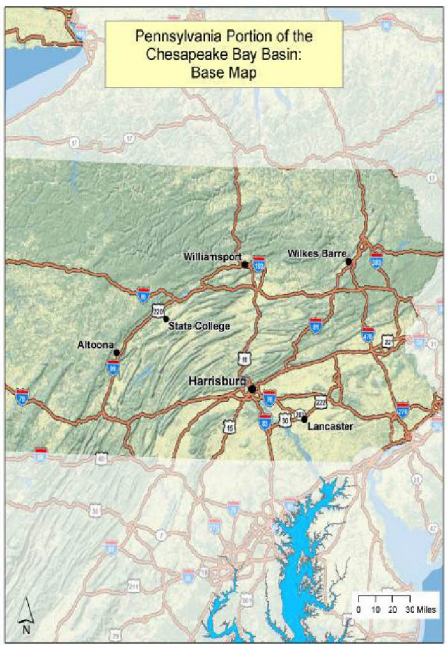
Patuxent
Eastern Shore Maryland
Rappahannock
York
James
Eastern Shore Virginia
0 20 40 60 80 100 Miles
N


Local Water Quality Issues

Pennsylvania's Susquehanna River and Chesapeake Bay Basin

- PA encompasses 35.2% of the Bay watershed -- that's 14,358,159 acres
- Four PA watersheds
  - Susquehanna River (13,298,520 acres, 32.6%)
  - Potomac River (1,012,222 acres, 2.5%)
  - Eastern Shore (40,262 acres, 0.1%)
  - Western Shore (7,155 acres, 0.02%)
- Impaired PA waters due to major sources including:
  - Agriculture
  - Mine drainage
  - Urban runoff/stormwater



Local Water Issues

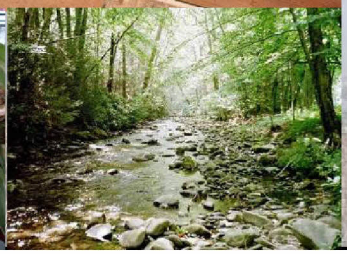
"We absolutely have to work together cooperatively to reduce nitrogen, phosphorous and sediment entering the bay."

State Senator Mike Brubaker

Intelligencer Journal Lancaster New Era

10/21/09

Local Water Issues

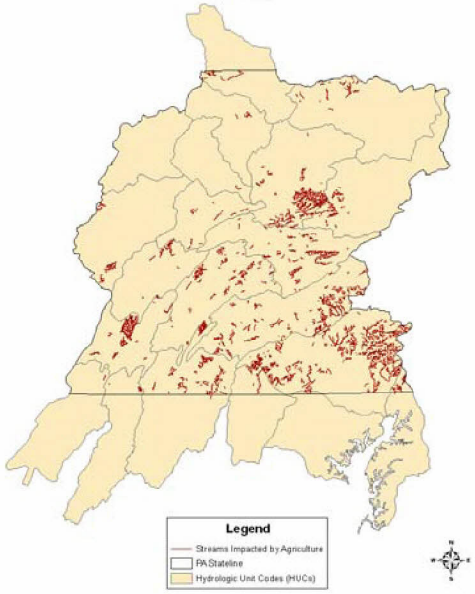


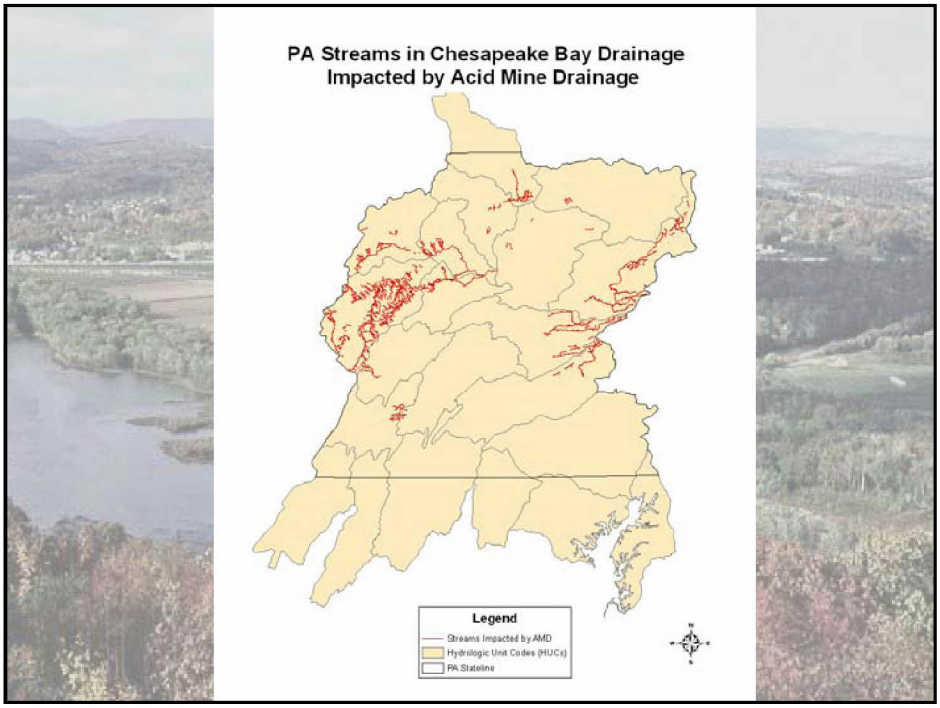
"I think Pennsylvanians love their water and farmers love their water. We take pride in facing up to some shortcomings and pride in the cleanups that have already occurred."

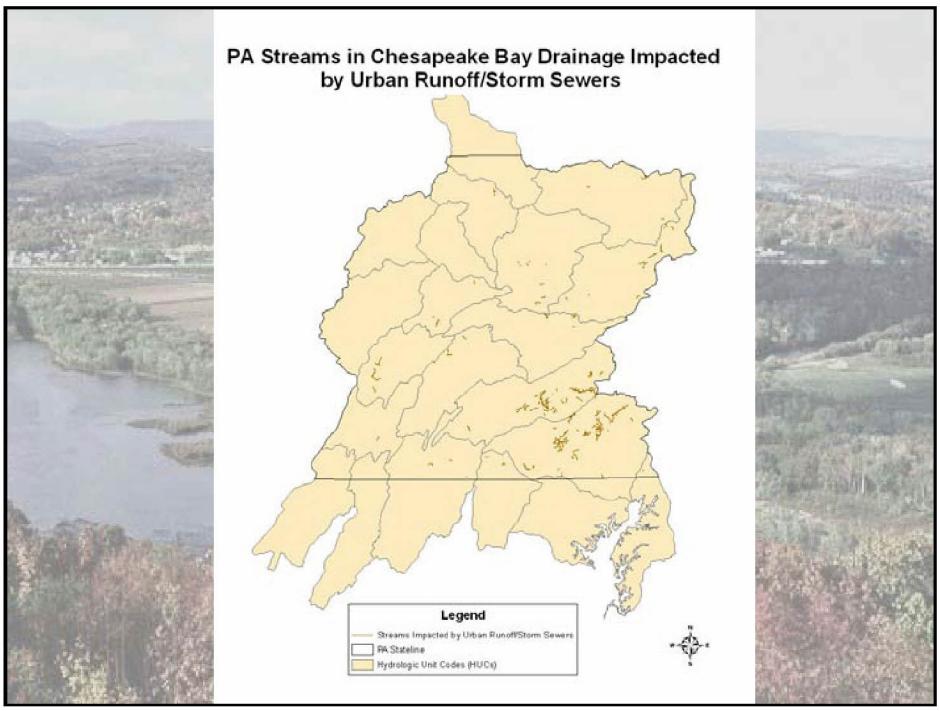
DEP Secretary John Hanger

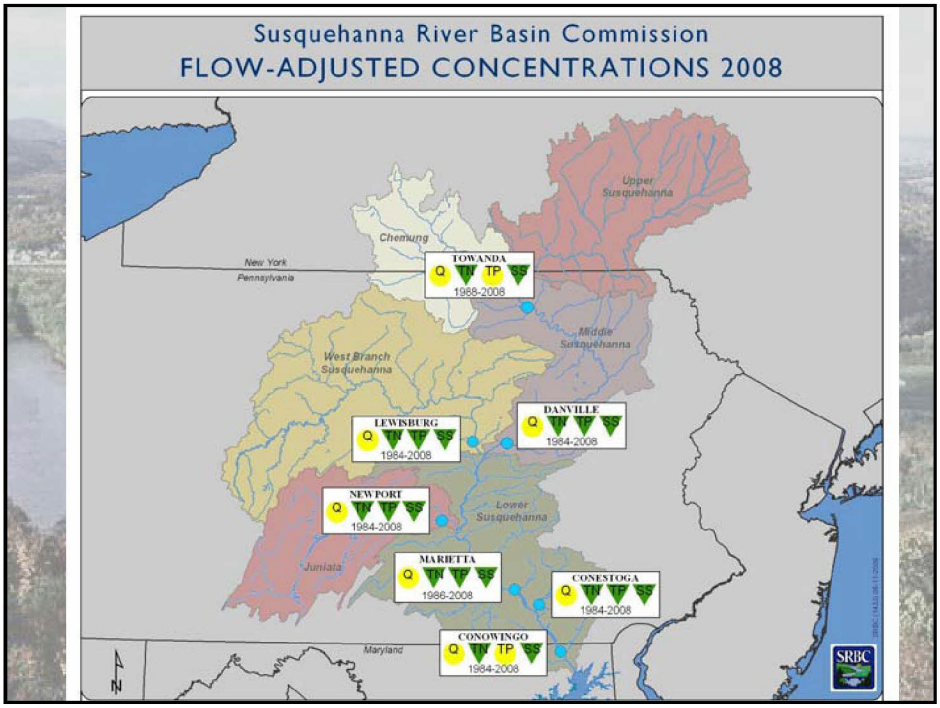
Intelligencer Journal Lancaster New Era
11/10/09

PA Streams in Chesapeake Bay Drainage Impacted by Agriculture




PA Streams in Chesapeake Bay Drainage
Impacted by Acid Mine Drainage
Legend
Streams Impacted by AMD
Hydrologic Unit Codes (HUCs)
PA Stateline


PA Streams in Chesapeake Bay Drainage Impacted
by Urban Runoff/Storm Sewers
Legend
Streams Impacted by Urban Runoff/Storm Sewers
PA Stateline
Hydrologic Unit Codes (HUCs)



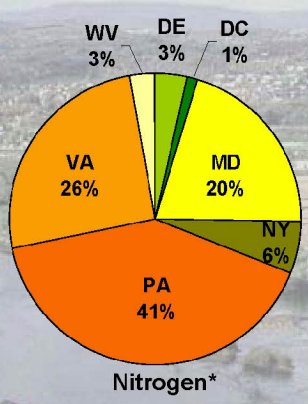
Chesapeake Bay Water Quality Issues

Chesapeake Bay Watershed-
By the Numbers

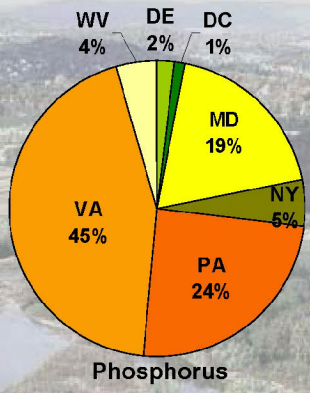
- Largest U.S. estuary
- Six-states and DC, 64,000 square mile watershed
- 10,000 miles of shoreline (longer then entire U.S. west coast)
- Over 3,600 species of plants, fish and other animals
- Average depth: 21 feet
- $750 million contribution annually to local economies
- Home to 17 million people (and counting)
- 77,000 principally family farms
- Declared “national treasure” by President Obama

Source: www.chesapeakebay.net

Nutrient Loads by State

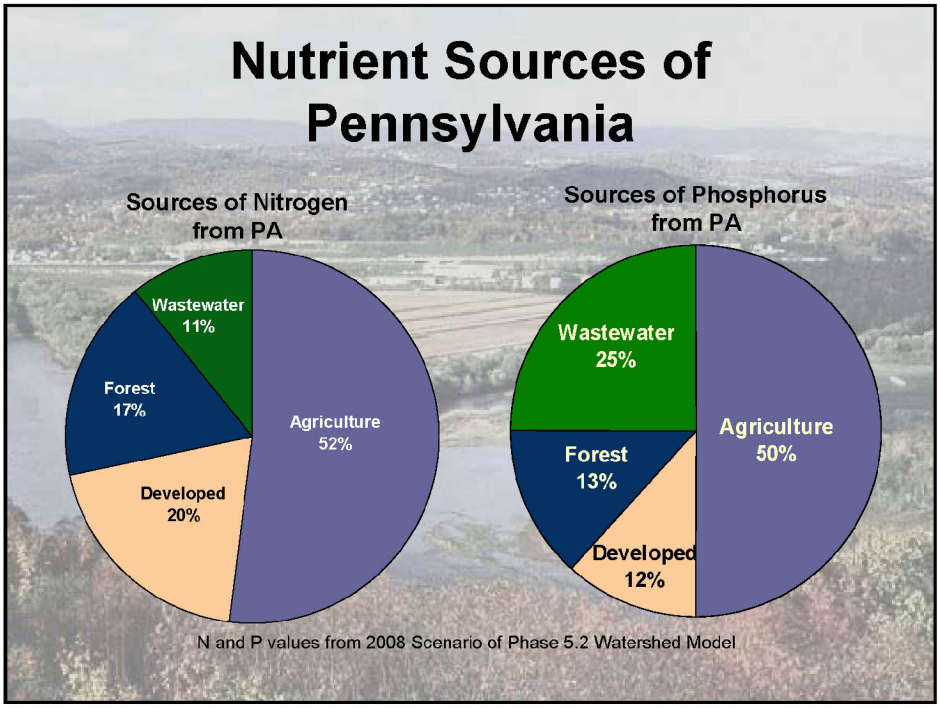


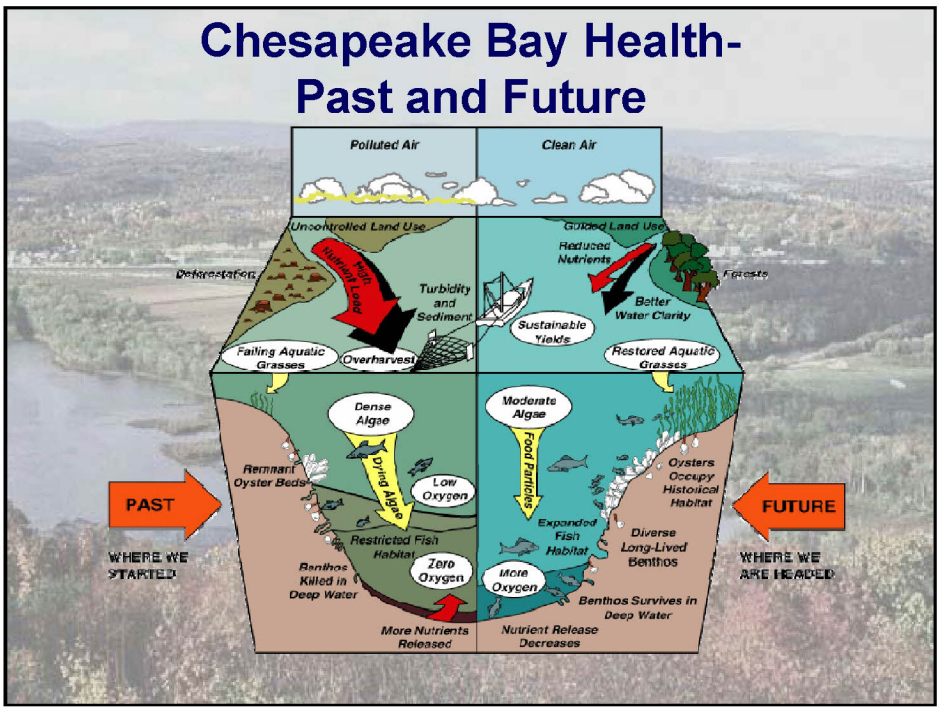
Nitrogen*

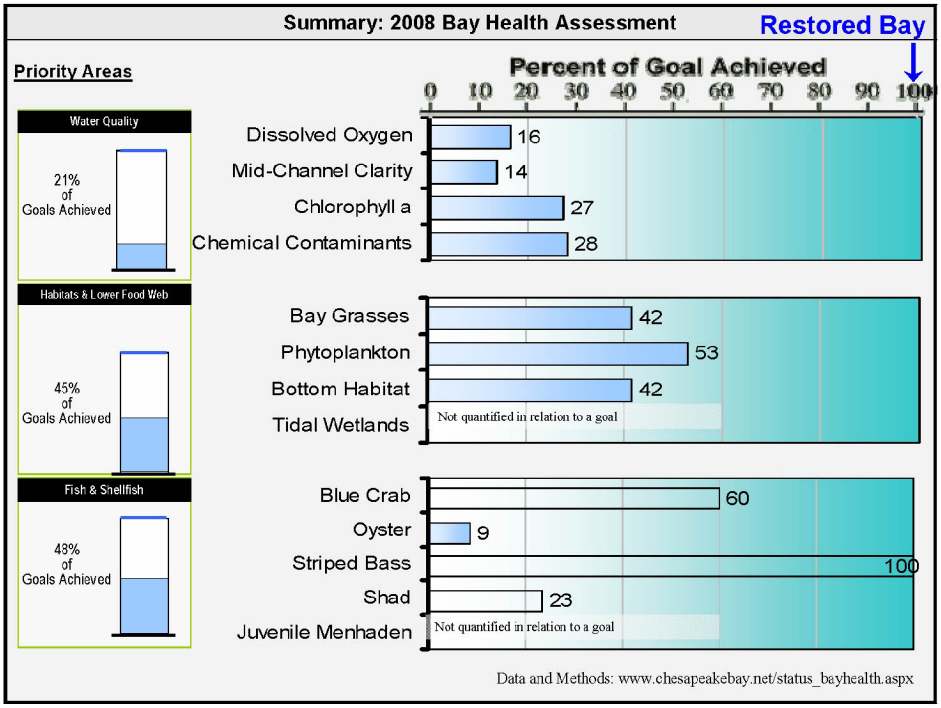


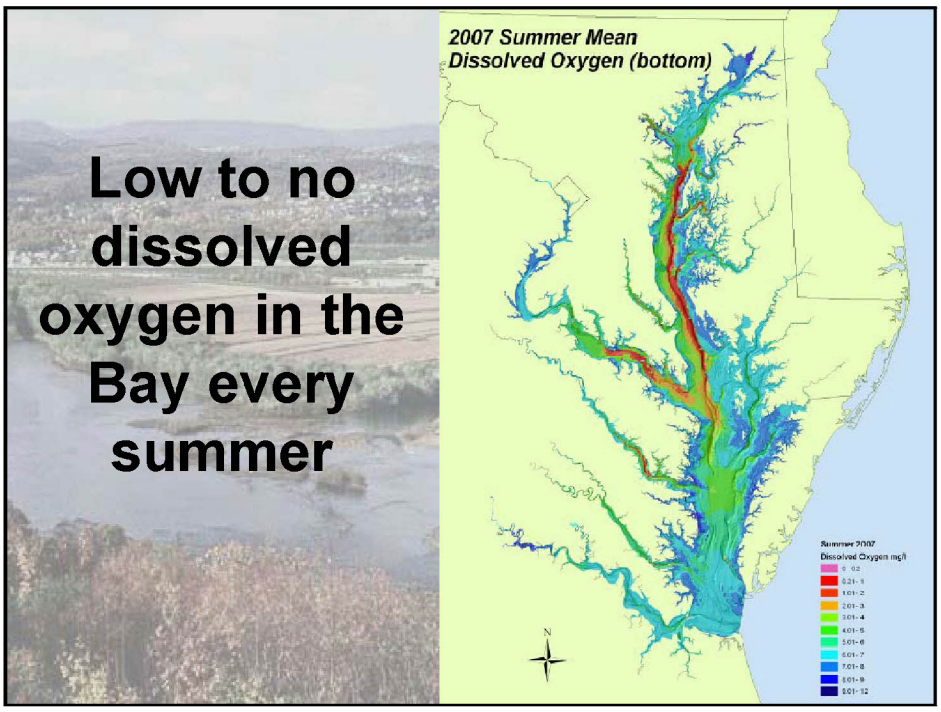
Phosphorus

*EPA estimates a nitrogen load of 284 million lbs nitrogen in 2008. EPA assumes a reduction of 7 million lbs due to the Clean Air Act. This leaves 77 millions lbs to be addressed through the TMDL process.


Nutrient Sources of Pennsylvania
Sources of Nitrogen from PA
Wastewater 11%
Forest 17%
Agriculture 52%
Developed 20%
Sources of Phosphorus from PA
Wastewater 25%
Forest 13%
Agriculture 50%
Developed 12%
N and P values from 2008 Scenario of Phase 5.2 Watershed Model

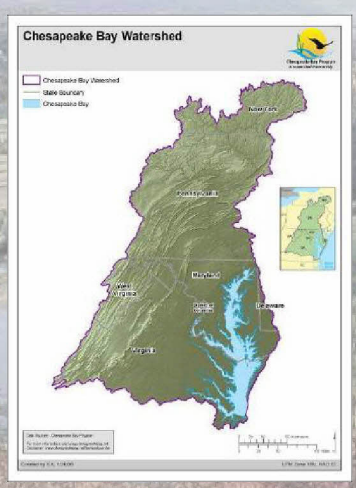

Chesapeake Bay Health- Past and Future
Polluted Air
Clean Air
Uncontrolled Land Use
Guided Land Use
Deforestation
High Nutrient Load
Turbidity and Sediment
Reduced Nutrients
Forests
Better Water Clarity
Sustainable Yields
Failing Aquatic Grasses
Overharvest
Restored Aquatic Grasses
Dense Algae
Moderate Algae
Remnant Oyster Beds
Drying Algae
Low Oxygen
Food Particles
Oysters Occupy Historical Habitat
PAST
FUTURE
Restricted Fish Habitat
Expanded Fish Habitat
Diverse Long-Lived Benthos
WHERE WE STARTED
WHERE WE ARE HEADED
Benthos Killed in Deep Water
Zero Oxygen
More Oxygen
Benthos Survives in Deep Water
More Nutrients Released
Nutrient Release Decreases


Summary: 2008 Bay Health Assessment
Restored Bay
Priority Areas
Percent of Goal Achieved
0 10 20 30 40 50 60 70 80 90 100
Water Quality
21% of Goals Achieved
Dissolved Oxygen 16
Mid-Channel Clarity 14
Chlorophyll a 27
Chemical Contaminants 28
Habitats & Lower Food Web
45% of Goals Achieved
Bay Grasses 42
Phytoplankton 53
Bottom Habitat 42
Tidal Wetlands
Not quantified in relation to a goal
Fish & Shellfish
43% of Goals Achieved
Blue Crab 60
Oyster 9
Striped Bass 100
Shad 23
Juvenile Menhaden
Not quantified in relation to a goal
Data and Methods: www.chesapeakebay.net/status_bayhealth.aspx

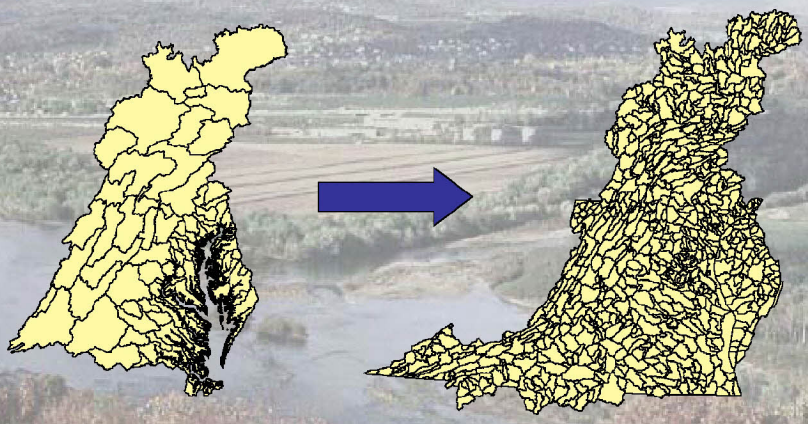

Low to no dissolved oxygen in the Bay every summer
2007 Summer Mean
Dissolved Oxygen (bottom)

The Chesapeake Bay TMDL

- EPA sets pollution diet to meet states' Bay clean water standards
- Caps on nitrogen, phosphorus and sediment loads for all 6 Bay watershed states and DC
- States set load caps for point and non-point sources



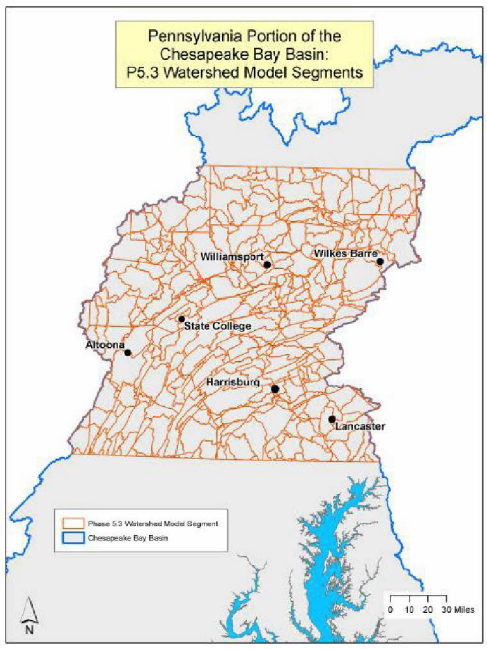
The Bay science supports local pollution diets…



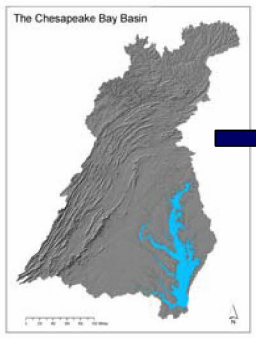
Phase 4 Bay Watershed Model
(2000-2008)

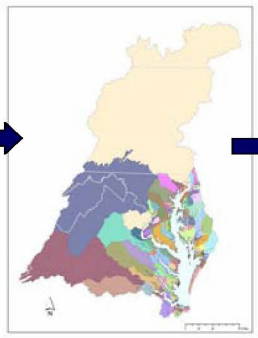
Phase 5 Bay Watershed Model
(2009-)

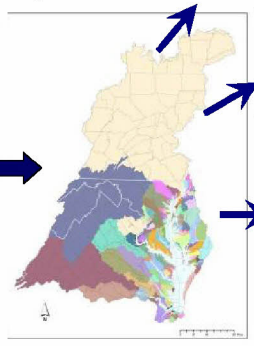
…with detailed representation of PA's local watersheds



Taking Responsibility for Load Reductions







Identify basinwide target loads

EPA, States, DC

Identify major basin by jurisdiction target loads

EPA, States, DC

Identify tidal segment watershed, county and source sector target loads

States, DC, local governments & local partners

What are the Target Pollutant Cap Loads for the Bay Watershed?

Current model estimates are that the states' Bay water quality standards can be met at basinwide loading levels of:

- 200 million pounds nitrogen per year
- 15 million pounds phosphorus per year

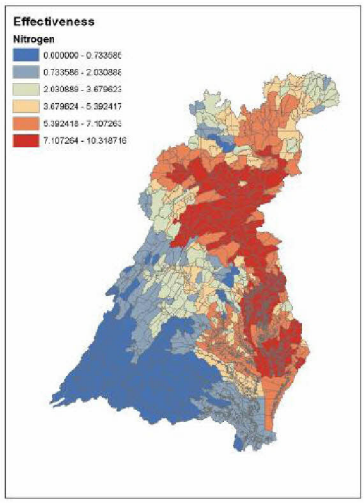
(Sediment target cap load under development-will be available by spring 2010)

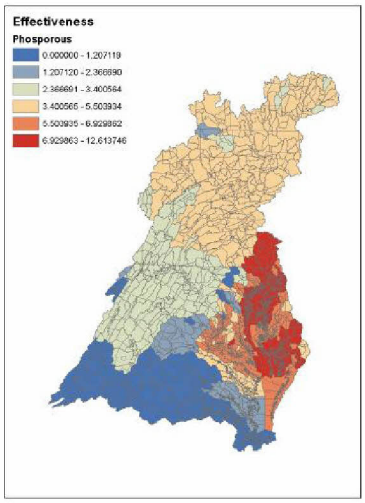
Dividing the Basinwide Target Loading

Guidelines for Distributing the Basinwide Target Loads

- Water quality and living resource goals should be achieved.
- Waters that contribute the most to the problem should achieve the most reductions.
- All previous reductions in nutrient loads are credited toward achieving final cap loads.

Nutrient Impacts on Bay WQ





Current State Target Loads

Nitrogen

State	Tributary Strategy	Target Load
DC	2.12	2.37
DE	6.43	5.25
MD	42.14	41.04
NY	8.68	10.54
PA	73.17	73.64
VA	59.30	59.22
WV	5.69	5.71
Total	197.53	197.76

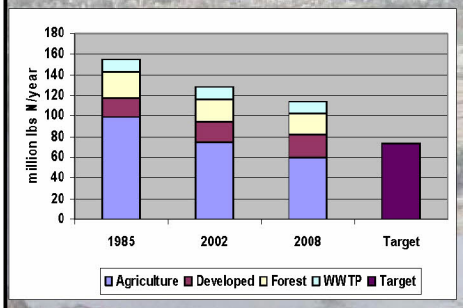
Phosphorus

State	Tributary Strategy	Target Load
DC	0.10	0.13
DE	0.25	0.28
MD	2.56	3.04
NY	0.56	0.56
PA	3.10	3.16
VA	7.92	7.05
WV	0.45	0.62
Total	14.93	14.84

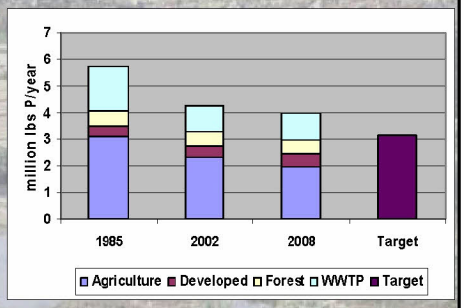
All loads are in millions of pounds per year.

PA's Past, Present and Future Estimated Loads

Nitrogen



Phosphorus

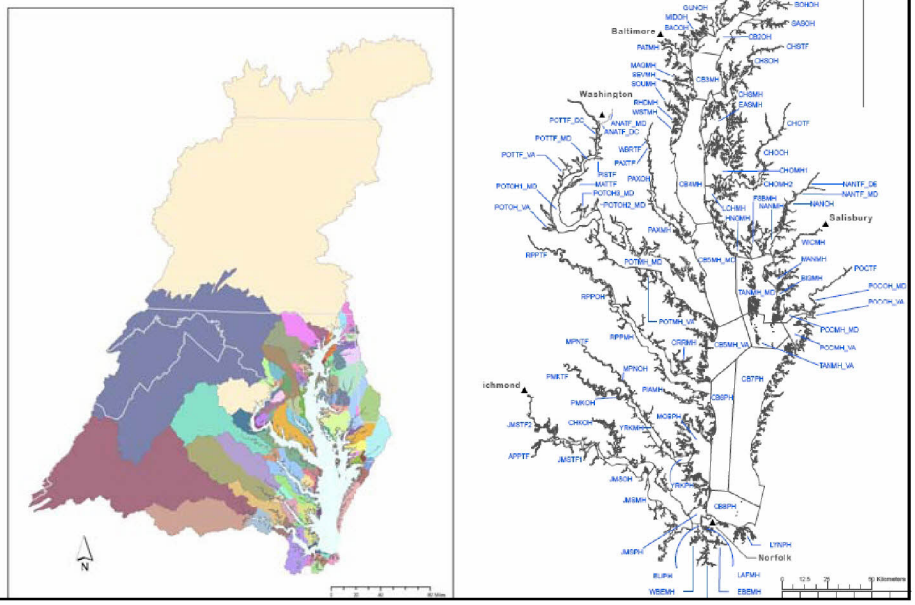


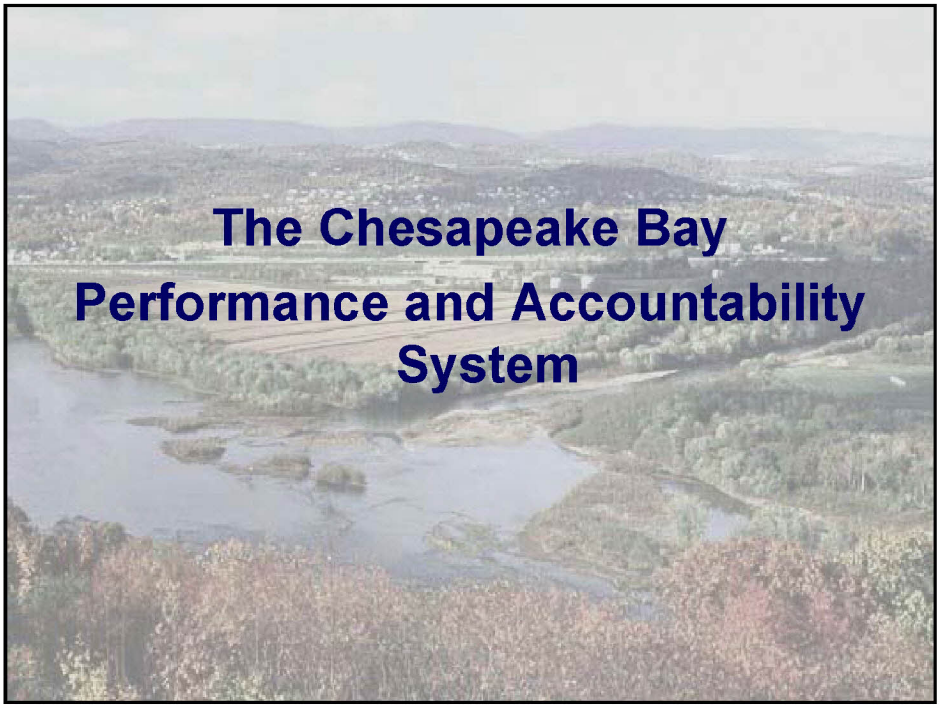
All scenarios run through Phase 5.2 Watershed Model

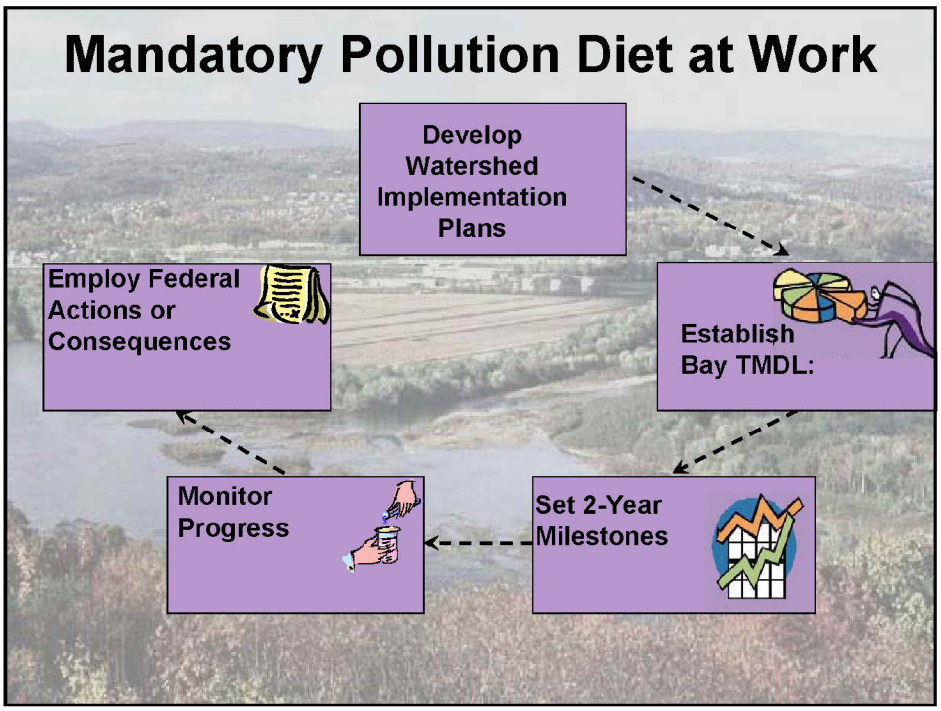
Target Load Refinements

- If States' Bay Water Quality Standards can still be achieved…
  - The State may exchange nitrogen and phosphorus target loads within a basin; and/or
  - The State may exchange nitrogen and phosphorus loads from one basin to another within the State.

Pollution Diet for Each Tidal Water Segment



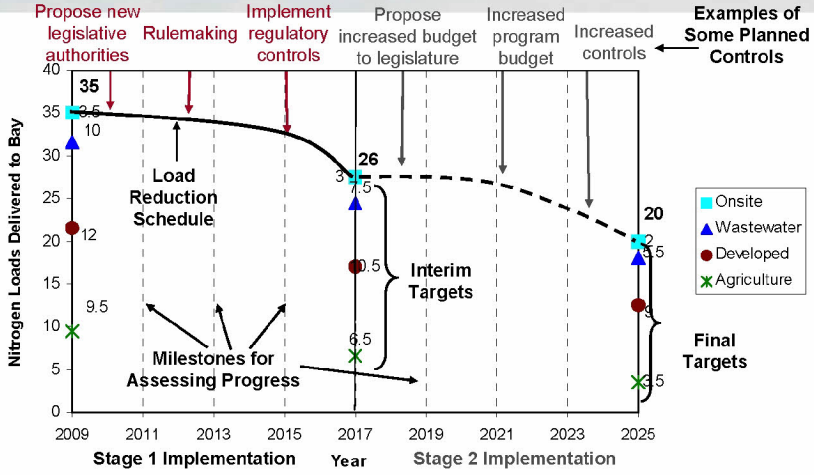

The Chesapeake Bay
Performance and Accountability
System


Mandatory Pollution Diet at Work
Develop Watershed Implementation Plans
Establish Bay TMDL:
Set 2-Year Milestones
Monitor Progress
Employ Federal Actions or Consequences

Watershed Implementation Plan Expectations

- Identify allowable loads by major river basin, tidal segment watershed, county and pollutant source sector
- Identify Program gaps and strategy
- Commit to develop and implement 2-year milestones at the county scale
- Develop contingencies

Example: Projected Nitrogen Delivery from Major Basin in Each Jurisdiction by Source Sector



- Also divide jurisdiction load by 303(d) segment drainage area and, by November 2011, local area
- Attain jurisdiction-wide load reductions by the interim target, or justify why can still meet final target
- Jurisdiction would determine desired 2-year schedule to meet interim and final target loads
- EPA first evaluates milestones based on consistency with jurisdiction target load. EPA accepts shifts among source sectors, basins, segment drainages, and local areas if jurisdiction target load is met and local and Bay water quality goals are achieved

Federal Consequences

- Directed at states not achieving expectations
- Will be outlined in an EPA letter this fall. May include:
  - Assigning more stringent pollution reductions to regulated point sources (e.g., wastewater, stormwater, CAFOs)
  - Objecting to state-issued NPDES permits
  - Limiting or prohibiting new or expanded discharges (e.g., wastewater, stormwater) of nutrients and sediment
  - Withholding, conditioning or reallocating federal grant funds

Bay TMDL- Presidential Executive Order Connections

- Create Federal Leadership Committee
- Create the Performance and Accountability Framework
- Expand regulatory tools for CAFO's and urban and suburban runoff
- Improve nutrient and sediment controls on federal lands and roads
- Target farm conservation measures at high priority areas

Your Role in Bay TMDL Process

Oct 2009

Major basin jurisdiction loading targets

November-December 2009

Bay TMDL Public Meetings

Phase 1 Watershed Implementation Plans: November 2009 – August 2010

Local Program Capacity/Gap Evaluation

August-October 2010

Public Review And Comment

December 2010

Final TMDL Established

Phase 2 Watershed Implementation Plans: Jan – Nov 2011

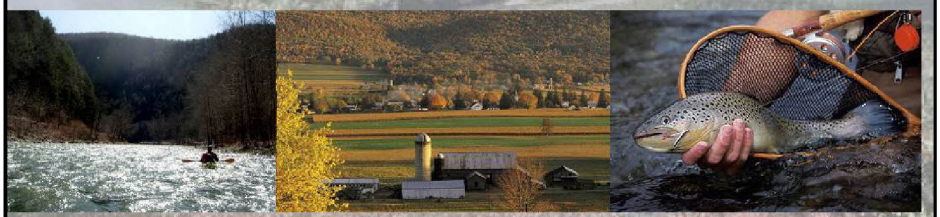
Divide Target Loads among Watersheds, Counties, Sources

Starting 2011

2-year milestones, reporting, modeling, monitoring

Bay TMDL: Bottom-line

- Actions will clean and protect local waters in DC thereby supporting the local economy
- Restore a thriving Chesapeake Bay
- Federal, state, local officials and agencies will be fully accountable to the public
- Consequences for inaction, lack of progress



Further Information

- Chesapeake Bay TMDL web site
  www.epa.gov/chesapeakebaytmdl
- U.S. EPA Region 3 Contacts
  - Water Protection Division
    - Bob Koroncai
      - 215-814-5730; koroncai.robert@epa.gov
    - Jennifer Sincock (sincock.jennifer@epa.gov)
  - Chesapeake Bay Program Office
    - Rich Batiuk
      - 410-267-5731; batiuk.richard@epa.gov
    - Katherine Antos (antos.katherine@epa.gov)


Thank you for your participation.
THANK YOU
That concludes today's meeting.

Questions Answered

Questions/Comments Answered (in the order in which they were asked):

1. Doug Graybill, Bradford County Farm Bureau Vice President.
What is your strategy for reducing the impact from legacy sediment that is currently stored behind the safe harbor dam, the Holtwood dam and the Conowinga? Are these sediments not dumped into the Bay during flood events? Is legacy sediment given adequate consideration?

2. Consequences including withholding federal grants to Pennsylvania for not meeting Bay loads is a viable threat only if it impacts the center of political power (e.g., Philadelphia and Pittsburgh). Central Pennsylvania is powerless to lobby for Pennsylvania standards on agriculture and other nonpoint sources currently not effectively regulated.

3. Anne Harris Katz, Chesapeake Bay Tributary Strategy committee member (representing Coalition for Responsible Growth and Resource Conservation)
Given projections for future growth of natural gas drilling in the Susquehanna River basin, what is EPA doing now and what does EPA plan for the future to account for treated fracking fluids entering the Chesapeake Bay? That is, how will EPA ensure fracking fluids will neither increase the salt load nor add toxins to the waters flowing to the Bay?

4. Dr. Scott Brearer, The Nature Conservancy
Amish communities play a significant role in the Nitrogen/Phosphorus agricultural pollution in Pennsylvania. Because they are a large part of the problem, they could be part of the solution. What are you doing to reach and educate Amish communities (via sticks or carrots)?

5. Will federal facilities and land management meet BNR performance standards and BMPs before the EPA comes after Phase 1 municipal wastewater plants for further reduction below current PaDEP 6mg/L nitrogen and 0.8 mg/L Phosphorus limits?

6. We have asked the local government and agriculture to step up and reduce. We want to reduce Nitrogen. Has anyone looked at lawn care business and lawn care products and uses of those?

7. How realistic is it that the current PaDEP Chesapeake Bay Strategy loading caps on municipal sewage plants will remain in effect after the TMDLs are developed?

8. Has the EPA, or any federal entity, assessed the costs of implementing these new regulations? If so, what are they? What sources of funds have been identified to subsidize the cost of these mandates?

9. Question for the state: How will the state agencies involve local governments in developing the Watershed Implementation Plans?

10. If point source and nonpoint source reductions are both required in order to meet Bay program goals, what role is there for nutrient trading?

10a. Has the EPA assessed the impacts that these regulations will have on the cost and timelines for future development? If so, how will EPA work with state regulators to assure that implementation of those regulations do not negatively impact economic development?

11. If nitrogen is the limiting nutrient for freshwater, phosphorus is the limiting nutrient for saltwater, and sediment is the limiting nutrient in tidal areas, then how can phosphorus credits be traded for nitrogen credits and vice versa at a 1:10 rate? (George Myers, Supt. Milton Regional Sewer Authority)

12. In Pennsylvania, the responsibility of oversight will be in the hands of PaDEP which has lost 20-30% of its staff. With all of the Pennsylvania concerns including Marcellus shale gas drilling and now the Bay TMDL, who will fund this role? Will the feds give money to the states?

13. What about CAFOs? How will they play into these issues?

14. By 2013 the Williamsport Sanitary Authority (WSA) Municipal Treatment Plants will reduce nitrogen levels by 75% from 2002 levels at a cost of $110+ million. Why would EPA come back after WSA for more reductions that will not have any significant impact on the Bay at huge additional costs?

Questions Submitted

Questions submitted, but not answered:

1. Has the EPA begun the process of setting a TMDL for the Mississippi River Watershed? Can you predict a timeframe?

2. Does the current model account for the nutrients entering the Bay from the Atlantic coast – following down from New York City, New Jersey, and the Delaware watershed? Supposedly this could be up to 20% of nitrogen.

3. Where does the restoration of the Menhaden Fishing and its vital importance and influence in nutrient cycling fit into the development of the Bay TMDL?

4 .Because nitrogen sources from ground water take longer to clean up, why not work on these landuse standards for implementation first?

5. How do you believe these regulations will impact the efforts of Pennsylvania's Phase I Publicly Owned Treatment Works (POTWs) that are currently addressing BNR/Chesapeake Bay issues using DEP guidelines? Will their project costs be increased and/or timelines be delayed or extended to meet these new regulations?

6. If everyone knows that further reductions in municipal sewage plant nutrient limits will not have any significant impact on the Bay, and will cost billions of dollars, why is the EPA threatening to lower them anyway?

7. How many pounds of nutrients must Pennsylvania reduce from all sources of current discharges in order to be compliant with EPA's TMDL strategy? (George Myers, Supt. Milton Regional Sewer Authority)

8. What are the pounds of total nitrogen and total phosphorous annually discharged by Pennsylvania to the Chesapeake? How many pounds of each must be removed? (Chuck Wunz)

9. What weight-to-volume concentration parts per million, entering the Chesapeake from the Susquehan, of nitrogen is equal to 200 million pounds per year?

10. For smaller, family-owned agriculture that are economically stressed, what additional tools and programs are anticipated? (Harold Webster, Clearfield County Conservation District)

11. Much evidence exists that under current BMPs and NPDES permitting, new residential development activity discharges higher quality discharges than agricultural use. Will the strategy address this reality rather than pointing fingers as has been done because that "developer" is so easily seen as the implementer of change?

12. Reducing nutrient discharge from wastewater treatment plants will never restore the Bay on its own. Agricultural pollution must be significantly reduced. Farms are allowed to spread manure under

conditions that sewage sludge (residuals, bio solids) would never be allowed. Will the U.S. Department of Agriculture begin regulating manure application by the same rules that apply to sludge?

13. The changes required for agriculture is a hugely expensive problem. How does EPA intend to enforce changes when the 77,000 farms just can't afford the changes required?

14. The Chesapeake Bay watershed initiative funding that is targeted for the Chesapeake Bay farm BMPs through NRCS is currently slated for counties from Snyder County south and north of Tioga and Bradford Counties, not in the north central part of the state. Only the EQUIP funding will fund in this area. This area will miss out on this important funding source. If ag enforcement will be increased in the future, will the north central part of the state also be included to use this funding source? How can this be assumed?

15. At this time, is there or is there not, a law or regulation that specifically mandates nutrient removal at all POTW's in the Chesapeake Watershed? (Al Sever)

16. Virginia is going to only regulate nutrients for discharges when those nutrients will actually reach the Bay. Pennsylvania is going to require all discharges treat for nutrients. How will EPA regulate nutrients – Virginia method or Pennsylvania?

17. At what locations are the states' nutrient allocations measured? (George Myers, Supt. Milton Regional Sewer Authority)

18. DEP had committed in recognition of the very small (4%) contribution of on-lot sewage systems, to continuing the current practice of allowing infiltration and renovation of domestic sewage through movement through qualified soils. Is there a movement toward chemical or physical removal of nitrogen and phosphorus as they are produced and carried in domestic effluent in areas serviced by onsite systems?

19. The Bay has many homes on its shore with septic systems. Does this amount to a problem and if so, is it being addressed?

20. With a minority of votes statewide, why do you believe that the municipal wastewater plant customers in central Pennsylvania will be able to effectively lobby for new state nonpoint (agricultural) rules in Pennsylvania?

21. Will EPA work with Congress and the Department of Labor to reduce the cost of nutrient reduction efforts such as waiving federal Davis Baccon wage rates that artificially inflate construction costs by 30%. Given the unsustainable federal deficit ($2.8 trillion) and ambitious new programs: National Health Care, Carbon Emissions/Greenhouse Gas limits, 2 wars – how can EPA/Federal Government provide any funding to meet the Chesapeake Bay TMDL?

22. How does EPA convert a total maximum daily load into monthly limits on point sources such as municipal WWTPs?

23. Nutrient reduction by wastewater treatment plants is one of the most expensive approaches on a pound of nutrient basis – but the easiest to mandate politically. Wouldn't agricultural removal – whether forced by pollution limits or subsidized through grants – be better for the economy?

24. The Pennsylvania responsibility will come down to DEP which has lost 20-30% of staff and funding at the same time that they need to monitor and regulate gas well drilling in Pennsylvania plus all the other water, air, etc. requirements and now add this, how? What funds will the Federal Government provide to the state?

25. The geology of the watershed is primarily an eroded plateau, especially in the northern tier. How has it been determined that the goal reflects the "historic" conditions of the Bay? To what historic condition will we return if we reach the TMDL numbers? Have past "natural" event been considered? Nature, even without human habitation is perpetually changing.

26. What will the penalties be to the states for non-compliance and who will pay the penalties?
Please address: The "emotional issue" of perceived federal mandates without federal financial assistance to water authorities in need of upgrading their facilities is creating economic hardships on fixed income and low income "end users" of public water utilities, especially as they anticipate a hefty rate hike from another utility, namely the 30% rate hike for electricity KWH from PPL effective January 1, 2010.

27. As the data continues to evolve which will be used to create the TMDL Pennsylvania target loading levels, questions come up as to the science used and/or access to the final data to be used for TMDL loading numbers. What will be the timeline for input before issuing final loading numbers? (Robert Wood)

28. Marcellus shale gas extraction could cause serious pollution to the Bay. How do you plan on addressing this potential threat?

29. Does the EPA model address water quality impacts of Marcellus shale natural gas development?
To what extent does gas industry, wastewater and total dissolved solids (TDS) and their effect on river life factor into consideration? (John Bogle, Responsible Drilling Alliance, Williamsport)

30. Because full disclosure of all chemicals used in hydrofracture process of gas well drilling is not required, how will these chemicals become a part of the TMDL accounting?

31. How does that exemption to the Clean Water Act granted to the gas and oil industry during the Bush Administration affect water quality standards?

32. According to the oil and gas industry, public affairs spokespeople, the Susquehanna River Basin can expect hundreds of millions of gallons of frack fluid to be produced over the next few years. Will the disposal of this frack liquid cause so much contamination that the nutrient TMDL problem will seem like a minor problem for the Susquehanna River? Is the EPA looking at the frack liquid issue? (Harvey M. Katz, CRGRC)

33. How will Marcellus flowback fit into a TMDL plan?

34. Though not significantly high in nutrients, the impending dramatic increase in dumping frackwater from the Marcellus shale drilling will likely increase TDS (salt) and harmful chemicals to unhealthy levels in the Susquehanna. What steps is the EPA planning to take to monitor and prevent this?

35. Will there be standards regarding pollution of chemical contaminants from EPA designated superfund sites, and/or from natural gas drilling fracking water, when such discharges from such sources enter the Chesapeake Bay watershed?

36. Why has Pennsylvania excused the gas industry from Clean Water Act standards?

37. When will we return Clean Water Act to gas company activities?

38. Since EPA has some influence on environmental progress, when will we not allow gas wells and frack ponds on flood plains?

Comments

Britt Bassett

The 2007 and 2009 Biological Nutrient Removal Conferences hosted by the Water Environment Federation focused on the limit of technology (LOT) for nutrient removal. Maryland has set limits on the monthly average for total Nitrogen (TN) of 3.0 mg/l and total Phosphorus (TP) of 0.3 mg/l. Based on papers presented at WEF, these limits are at or below the LOT in Pennsylvania, give our colder climate. If EPA/DEPA sets these limits in Pennsylvania our waste water treatment plants will not be able to meet them.

EPA Listening Session on the Total Maximum Daily Load (TMDL) allocations for Pennsylvania

1. Before Pennsylvania agriculture is required to implement new Best Management Practices or before new regulations are created to meet the TMDL goals, we need to insure that there is an accurate accounting system in place to credit the existing BMPs within the Chesapeake Bay Model that have already voluntarily been installed by farmers.
2. Agriculture has made great improvements over the past 20 years. Given the economic times, before new cap loads are mandated onto agriculture, we need to insure that the proper funding is available to implement the BMPs at the farm level.
3. The current Executive Order is not specific enough for farmers to understand the practices that the EPA or State will require farmers to implement. EPA is demanding increased accountability to meet the TMDL goals. Adequate time needs to be given for agriculture to prepare to offer solutions that will work to further improve water quality, meet the executive order, and allow agriculture the flexibility to remain economically viable.

Russell A Reitz